

## 36. DOUM PALM AT BHANGARH, RAJASTHAN?

After reading the short note titled "Doum Palms at Bhangarh in interior Rajasthan" (*JBNHS*, 1994, 91(3): 476) (author has given the name of place Bhangarh, actually its pronunciation is Bhangarh in the area), I contacted the Field Director, Tiger Project, Sariska and Range Forest Officer, Tehala to confirm the presence of doum palms (*Hyphaene dichotoma*) at Bhangarh, a locality in their jurisdiction. With the assistance provided by the local authorities, I scrutinized the whole Bhangarh stream thoroughly and reached the conclusion that *Pandanus fascicularis* (Family Pandanaceae) was misidentified as doum palm. *Pandanus fascicularis* is locally called 'Kevda'. Indeed, it is an old sacred grove of Kevda, having plants of different heights and ages. A large number of old plants have taken the shape of small trees and have dichotomous branching

also. However, branching is not truly dichotomous in many plants. A good number of plants are more like shrubs. Plants attain erect tree posture and also develop profuse aerial stilt roots *P. fascicularis*, though a garden plant, often runs wild along streams in moist and marshy habitats in many places in Rajasthan like Bhangarh (Alwar), Kevda-Ki-Nal, Bari Talab, Thur (Udaipur), etc.

The author is grateful to Mr. Tejveer Singh, Field Director, Project Tiger, Sariska; Mr. Suresh Sharma and Mr. Satish Sharma of Tehala Range for assistance.

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37. *TYPHONIUM FLAGELLIFORME* (ROXB. EX LUDD.) BLUME,  
FAMILY ARACEAE: AN ADDITION TO THE FLORA OF ORISSA

The genus *Typhonium* Schott., Family Araceae, has 30 species occurring in Southeast Asia, Indo-Malaysia and Northeastern Australia (Mabberley 1997). In India, the genus is represented by 16 species (Santapau and Henry 1973), which are mostly distributed in the states of West Bengal, Orissa, Bihar, Tamil Nadu, Kerala, Maharashtra, Himachal Pradesh and the western Peninsula. During field collection of *Typhonium trilobatum*, to study its medicinal properties, we came across another species of *Typhonium*, which closely resembles *trilobatum*, but differs from it in a number of morphological characters. On critical examination, its identity was ascertained as *Typhonium flagelliforme*. Interestingly, this species has not been reported so far from Orissa (Saxena and Brahmam 1995) and this is a new distributional record for the state.

*Typhonium trilobatum* and *T. flagelliforme*

can be distinguished from each other by the following consistent morphological characters:

1. Limb of spathe narrowly lanceolate, acuminate, not expanded. Neuters above the females short and stout. Appendage longer than limb of spathe ..... *T. flagelliforme*
  - Limb of spathe open, broadly ovate. Neuters above the females long, filiform, curved. Appendage not longer than limb of spathe ....  
..... *T. trilobatum*
- Correct nomenclature, botanical description, notes on habitat, phenology, and distribution of the newly recorded species are given below.

*Typhonium flagelliforme* (Roxb. ex Lodd.) Blume, Rumphia 1: 134. 1835; Gamble, Fl. Presid. Madras 3: 1100. 1935. *Arum flagelliforme* Roxb. [Hort. Beng. 65. 1814, nom. Nud.] ex Lodd. Bot. Cab. 396. 1819. *Typhonium cuspidatum* (Blume) Decne Herb. Timor in Ann.

Hist. Nat. 3: 39. 1834; Hook. f., Fl. Brit. India 6: 511. 1893; Prain, Bengal Pl. 2: 1107. 1903. (Araceae).

Tuberous, erect, stemless herbs; tuber up to 2 cm diameter, sub-globose. Leaves radical, up to 8.0-15.0 x 2.0-6.0 cm, of variable width, ovate-oblong or lanceolate, acute or acuminate, cordate at base, hastately 3-lobed or tripartite, rarely entire, long petioled, reticulately veined, green above, glaucous beneath. Petiole 10.0-15.0 cm long, base sheathing. Spathe up to 20 cm long (including the tail), lurid red, papillose within; limb of spathe with short lanceolate base produced into a very long, slender tail. Peduncle slender, up to 15 cm long. Spadix shortly stipitate, appendage produced into a long filiform tail, a little longer than spathe. Male inflorescence up to 6 mm long, cylindrical; yellow. Female inflorescence sub-globose. Neuters above female inflorescence few, clavate or obovoid with purple tip, those above the male subulate, white. Anthers minute, yellow. Ovary clavate green. Berries ovoid, 1-2 seeded; seeds globose, albuminous.

Not common; in shady moist localities and

grassy waste places.

**Fl. & Fr.:** July-September.

**Distribution:** India, Bangladesh, Myanmar, Thailand, Cambodia, Vietnam, Malaysia and Indonesia.

**Specimens examined:** Jashapada, Cuttack district, Orissa, 17.vii.1999, P.C. Panda 6675; Bhubaneswar, Khurda district, Orissa, 17.vii.1999, S.C. Jena, 6671.

**Illustration:** Wight, Icon. t. 791. 1844.

*Typhonium flagelliforme* can be distinguished from its closely allied species *Typhonium trilobatum* in the field by its short height, smaller and shallowly lobed leaves, small and smooth tubers with a brownish-black skin and nature of the inflorescence. Both occur in similar habitat, but the former prefers relatively open places and soil having less organic materials.

June 5, 2000

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#### REFERENCES

MABBERLEY, D.J. (1997): The Plant Book, 2nd Edn, Cambridge University Press, U.K.  
SANTAPAU, H. & A.N. HENRY (1973): Dictionary of flowering plants and ferns of India, CSM, New

Delhi.

SAXENA, H.O. & M. BRAHMAM (1995): Flora of Orissa, Vol. 4, Regional Research Laboratory and Orissa Forest Development Corporation, Bhubaneswar.

### 38. OBSERVATIONS ON THE GENUS *RADIOCOCCUS*, FAMILY CHLOROPHYCEAE, A NEW RECORD FOR INDIA

(With one text-figure)

Schmidle (1902) established the genus *Radiococcus*, a chlorococcalean. This genus is widely reported from Belgium, Germany, England (Schmidle 1902) and U.S.A. (Smith 1950). According to Philipose (1967), three species of *Radiococcus* are known to occur, which are not yet reported from India. Although Singh *et al.* (1953) have reported an alga from Allahabad, which they have identified as *Radiococcus*

*nimbatus*, the description does not tally with that of Schmidle for this alga. The present paper describes *Radiococcus nimbatus*, which could be the first authentic report from India.

The alga was collected from Ramgarh Lake, Jaipur while surveying the freshwater algae of Rajasthan in September. It was found growing in slow running water in a shallow ditch with other chlorococcalean and blue-green algae. The